DMS Curriculum Plan

SUBJECT: Computing

At Dorchester Middle School, as part of our planning in Computing we ensure that pupils can remember more and learn more by weaving knowledge and skills throughout units of learning so that children have time to practise, discuss, reflect and revisit what they have been taught. We carefully follow the National Curriculum and ensure learning is progressive and sequential, giving pupils the opportunity to build on and apply previous knowledge in all units before developing further skills in this subject.

Key Skills in this subject are:

KEY SKILL	EXPLANATION
Computer Science	Through structured progression from Year 5 to Year 8, pupils develop core computer science knowledge and skills, including algorithms, decomposition, abstraction, and debugging. Pupils are introduced to programming using block-based tools in Year 5, advancing to text-based coding in Python by Year 8. They learn how technology has developed overtime and the properties of technology. They learn how computers work, how data is processed, and how logical reasoning supports the creation of efficient programs.
Digital Literacy	Our Computing curriculum embeds digital literacy throughout Years 5 to 8 by equipping pupils with the knowledge and skills to use technology safely, responsibly and respectfully. This includes using the Internet for research purpose, sending emails, use of files and folders including naming conventions. They are taught how to develop positive online communication habits to become confident, safe digital citizens.
ICT	Our department ensures pupils become proficient in a wide range of ICT applications. From word processing and digital presentations to spreadsheets and multimedia editing, pupils gain hands-on experience using software tools for practical purposes. These skills are developed through real-world contexts such as data handling, online publishing, and video production, , preparing them for further study and use in the wider world.

- ✔ Knowledge pupils will have learnt by the end of each half term.
- ✔ Summative assessment completed by pupils to check their learning each term.

TERM	Year 5	Year 6	Year 7	Year 8
T1 KNOWLEDGE	Understanding digital identity and using PowerPoint to present structured personal information.	Understanding binary, how it represents text and images, and converting between number systems.	Understanding binary, how it represents text and images, and converting between number systems.	Understanding how technology has developed over time, how the development of microprocessors has supported this and which features support this change.
T1 SKILLS	Create and format slides with text boxes and images using consistent design.	Convert binary to decimal, use binary to design pixel art.	Convert binary to decimal, use binary to design pixel art.	To be able to describe how technology has developed and using key technical terms to support their understanding.
T2 KNOWLEDGE	Knowing how to research endangered species and evaluate websites for trustworthiness. Independently create a presentation to showcase their research using a success criteria to work towards.	Using spreadsheets for modelling with formulas and exploring formatting tools.	E-safety knowledge including cookies, digital footprints and responsible communication.	Understanding how the Internet and networks work, including transmission media and emerging technologies including the Internet of Everything.
T2 SKILLS	Using hyperlinks, inserting images, and consistent slide transitions in PowerPoint.	Enter data, apply formulas (SUM, COUNT), use conditional formatting.	Plan and create an e-safety comic strip using planning documents, Vectr, Canva and /or Microsoft PowerPoint.	Create a poster aimed at the year 7 to explain how the Internet works and how we are able to share data.

SUMMATIVE ASSESSMENT 1	Year 5	Year 6	Year 7	Year 8
T3 KNOWLEDGE	Understanding how simple programs like Scratch work using sequence, selection, and repetition.	Identifying hardware/software and understanding their role in computing systems.	Exploring computational thinking principles including decomposition and abstraction.	Identify and use variables, functions and iteration when creating programs in python, using text based programs.
T3 SKILLS	Designing programs using loops and conditions in Scratch.	Sorting and labelling components, explaining I/O and processing relationships.	Break down problems and organise steps using diagrams or flowcharts.	Create programs using variables and inputs as variables. Use sequence and selection in their programs using the most efficient code.
T4 KNOWLEDGE	Build upon their knowledge of sequencing, variables, selection, and count-controlled iteration using prior knowledge, using Scratch. Pupils will apply their knowledge of these concepts.	Understanding computational thinking and how these are applied in computer programming. Build upon their knowledge of sequencing, variables, selection, and count-controlled iteration using prior knowledge, using Scratch.	Understanding basic sorting algorithms and their efficiency. Understanding how logic gates work in Computing and Programming.	Learn the different types of selection and loops. Learn the different arithmetic operators and comparative operators.
T4 SKILLS	Design programs in scratch using the knowledge of sequencing, variables, selection, and count-controlled iteration.	Writing computer programs, including sequencing instructions variables, selection, and count-	Create and compare bubble/merge sort using pseudocode and unplugged activities. Be able to draw and	Writing efficient programs using loops, functions and variables. Create modular code

		controlled iteration using Scratch. Some may move onto Python Turtle.	name different logic gates in algorithms.	using def(), for loops and lists.
SUMMATIVE ASSESSMENT 2	Year 5	Year 6	Year 7	Year 8
T5 KNOWLEDGE	Understanding how images and media are combined to create content for an audience.	Understand how to plan and create a digital storybook, using planning documents. Being able to target their audience using font styles, colours, text sizes and information.	Understanding when and how to use variables, inputs, outputs and conditions in Python.	Understand how to research using the Internet and reference websites used. Identity a business plan and the different areas with a business.
T5 SKILLS	Editing media elements and combining them in creative IT projects.	Create a digital storybook using PowerPoint. Use shape tools, align, edit points, add transitions, and hyperlink pages.	Write simple Python programs with variables, iteration and sequencing.	Create a plan using various software to help develop business ideas eg. Word, Excel and PowerPoint.
T6 KNOWLEDGE	Recognising how to structure, plan and record a video project with a purpose.	Using Word and PowerPoint to present learning in structured, annotated documents.	How formulas and logic model real-life problems in spreadsheets.	Understand the different elements to a business advert and be aware of information the audience need to know to buy the product.

T6 SKILLS	Storyboarding, filming and editing using apps like Clips or iMovie.	Insert screenshots, annotate evidence, format text clearly and appropriately.	Use IF statements and create interactive quizzes with conditional formatting.	Create an advert using Blippar that is aimed at their target audience.
SUMMATIVE ASSESSMENT 3				

Curriculum Enrichment	**Trip to Bletchley Park/touch typing club**

Aspect	**Key Stage 2 (KS2)**	**Key Stage 3 (KS3)**
Computer Science		
ICT		
Digital Literacy		